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ABSTRACT

Instructors search for methods to enhance students' motivation and learning. Immediacy and relevance have been linked to increased motivation in the classroom. A study extended research by A. Frymier and G. Shulman (1995) that found immediacy and relevance to be associated with one another. A 2 (high and low immediacy) by 2 (high and low relevance) experimental design was used to investigate the interaction between immediacy and relevance and their impact on motivation and learning. Results indicated that immediacy had a significant impact on motivation and learning, while relevance did not. Contains 21 references and a table of data. (Author/RS)

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Does Making Content Relevant Make a Difference in Learning?

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Abstract

Instructors consistently search for methods to enhance students' motivation and learning. Immediacy and relevance have been linked to increased motivation in the classroom. The purpose of this study was to extend research by Frymier and Shulman (1995) that found immediacy and relevance to be associated with one another. A 2 (high and low immediacy) x 2 (high and low relevance) experimental design was used to investigate the interaction between immediacy and relevance and their impact on motivation and learning. Results indicated that immediacy had a significant impact on motivation and learning, while relevance did not.

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Recently Frymier and Shulman (1995) put forth the concept of relevance as a communication strategy that could enhance students' motivation to study. Relevance was defined as a student perception of whether the course instruction/content satisfies personal needs, personal goals, and/or career goals (Keller, 1983). Frymier and Shulman (1995) expected immediacy and relevance to be independent of one another, however, they found a moderate correlation between immediacy and relevance in the classroom. They suspected that instructors "who are successful at making content relevant for students may first be using immediacy to gain students' attention" (p. 49). The purpose of the following research is to extend Frymier and Shulman's (1995) research using an experimental design to investigate the extent to which relevance and immediacy interact with one another in influencing students' learning and state motivation to study.

Relevance

As stated above, relevance is defined as a student perception of whether the course

instruction/content satisfies personal needs, personal goals, and/or career goals (Keller, 1983). Such perceptions are in part influenced by how content is presented by instructors. Weaver and Cottrell (1988) suggest relating content to students' goals, values, and behaviors in order to increase relevance. Sass (1989) suggests the use of explicit explanations and examples to demonstrate the relevance of the content to career goals and experiences. Keller (1987a) suggests that teachers match the content with students' goals and motives, and that they make the content familiar to students. Keller (1987a) also notes that linking the content to familiar experiences/ideas will increase its relevance.

Keller (1983; 1987a; b) identified the concept of relevance as a key component of motivation in his ARCS (attention, relevance, competence, satisfaction) model of motivation. Relevance is viewed as an important component of motivation because relevant tasks/content satisfy students' needs, such as the need for power, the need for achievement, and the need for affiliation (Keller, 1983).

Although the idea that relevance increases motivation is rather intuitive, little research has been conducted to support this assumption. Newby (1991) observed beginning teachers and categorized their motivational strategies as either attention getting, making content relevant, confidence building, or satisfying (operationalized as rewards and punishments). Newby found that though relevance strategies were used least, they were positively associated with time on task by students. This suggests that content relevant communication is associated with motivation, but is not a frequently used behavior (at least in the case of new teachers).

Visser and Keller (1990) applied the ARCS motivation model to the instructional design of a training workshop in Mozambique, and reported much higher levels of motivation among participants than expected. Although this research provides some general support for the use of relevance (since relevance is a component of the ARCS model), relevance was not isolated and examined independently of other variables being manipulated in the study.

Frymier and Shulman (1995) developed a measure of students' perceptions of the relevance strategies being used by their instructors and found relevance was associated with state motivation to study. Frymier and Shulman (1995) had expected the use of relevance by instructors to be independent of immediacy and when used with immediacy to create higher levels of state motivation than either construct alone. Instead, they found relevance to be moderately correlated with both verbal and nonverbal immediacy. To explain this unexpected finding, they proposed that teachers first use immediacy to gain students' attention before using relevance strategies. In the present study we seek to examine Frymier and Shulman's hypothesis that immediacy serves as a necessary condition (to get students' attention) for relevance to be effective. We therefore put forth the following hypothesis:

H1: Students in the high immediacy and high relevance (HI/HR) condition will report greater

motivation, affective learning, and cognitive learning than students in the low immediacy and high relevance (LI/HR) condition and students in the high immediacy and low relevance (HI/LR) condition.

Based on the above hypothesis, relevance is only effective when students are paying attention, and immediacy acts to increase attention. Therefore, we would expect the LI/HR and the LI/LR conditions to be result in roughly equal levels of motivation and learning. Since immediacy has consistently been associated with higher levels of motivation and learning, we expect the HI/LR condition to result in greater motivation and learning than the LI/HR or the LI/LR conditions. We therefore put forth the following hypothesis:

H2: Students in the HI/LR condition will report greater motivation, affective learning, and cognitive learning than students in either the low immediacy and high relevance (LI/HR) condition or the low immediacy and low relevance (LI/LR) condition.

METHOD

Participants

Participants in this study consisted of 190 students in a basic public speaking course. The sample consisted of 103 males, 83 females and 4 unidentified, of who were 17.1% first year students, 67.4% sophomores, 9.6% juniors, and 5.9% seniors.

Procedure

In order to test the above hypothesis and research question, we used a 2 (high and low immediacy) X 2 (high and low relevance) experimental design. Students in eight sections of the public speaking class (approximately 26 students per section) were told by their instructor that they were to have a "guest lecturer" who would be presenting information on the use of "supporting material" in their speeches. The presentation lasted approximately 15 minutes. Each condition (e.g., high immediacy-low relevance) was presented to two sections. Students were not told that any type of evaluation would occur afterwards. Additionally, students had not been asked to read the chapter that corresponded with the presentation (they

were not explicitly told not to read it, they simply were not asked to read it). Two students reported having read the chapter. Immediately after the presentation, one of the authors walked into the classroom, introduced herself as a member of the Faculty Development Committee, and made the following statement:

> The Faculty Development Committee is evaluating the use of guest speakers in classes, so I'm following guest speakers around and asking students to evaluate them. I have a very short evaluation form that I'd like you to complete. Please do not put your name on it. If you've had Dr. ____ before, please write 'yes' on the top of the form.

The two students who wrote "yes" at the top of the form were deleted from the sample. We deleted these students because we thought their prior experience with the guest speaker (who is an outstanding teacher) may influence their perceptions and subsequent completion of the survey form. Each presentation by the "guest speaker" was videotaped unbeknownst to the students.

Independent Variables

Relevance. As discussed above, relevance is defined as a student perception of whether the course instruction/content satisfies personal needs, personal goals, and/or career goals (Keller, 1983). Strategies for increasing relevance include using specific and familiar examples that relate to students' lives, discussions and examples that link content to career interests or content from other classes, or using exercises or explanations that help students understand the importance of the content to their personal goals and needs.

To manipulate relevance, examples were made familiar and linked to local events in the "high relevance" condition. In the "low relevance" condition, the examples were made more abstract and less familiar. Examples were used in both the high and low relevance conditions in order to make both conditions comparable in length and content.

Nonverbal Immediacy. Immediacy is conceptualized by Mehrabian (1971) as behaviors that signal approach. Nonverbal immediacy behaviors include things such as eye contact, smiling, moving close to students, using vocal variety, and using positive gestures. The use of nonverbal immediacy behaviors (Richmond, Gorham, & McCroskey, 1987) by teachers have been found to have a positive impact on students. Specifically nonverbal immediacy has been associated with increases in affective learning (Andersen, 1979), with perceived cognitive learning (Gorham, 1988; Richmond, et al., 1987), recall of information (Kelley & Gorham, 1988), and motivation (Christophel, 1990; Frymier, 1993a,b, 1994; Richmond, 1990).

To manipulate immediacy, the "guest lecturer" made frequent eye contact with students, moved about the classroom, used vocal variety, and smiled at the students in the high immediacy condition. In the low immediacy condition, the guest lecturer stood behind the podium, rarely looked directly at students, used a monotone voice, and never smiled.

Dependent Variables

State Motivation. Brophy (1987) defined student motivation to learn as "a student tendency to find academic activities meaningful and worthwhile and to try to derive the intended academic benefits from them" (p. 205). Motivation has been found to be an important predictor of learning (Frymier, 1994).

Motivation to study was measured with Richmond's (1990) motivation scale which consists of five, seven-step bi-polar adjectives which followed the statement, "These items are concerned with how you feel about studying the content presented by the guest speaker." The alpha reliability for the state motivation scale in this study was .81, with a $M = 23.08$, and $SD = 4.33$.

Affective Learning. Affective learning was operationalized using one of the subscales from Gorham's (1988) affective learning scale. This scale consisted of four, seven-step bi-polar adjectives (good/bad; worthless/valuable; fair/unfair; positive/negative) which asked the students their "attitude toward the content presented by the guest

speaker." The affective learning subscale had an alpha reliability of .84, a M = 22.68, and a SD = 3.72.

Cognitive Learning. Cognitive learning was operationalized with 5 fill-in-the-blank questions asking the students, "What you learned from the guest speaker's presentation." Two of the questions contained two blanks, making 7 the highest possible score on the quiz. The mean score on the quiz was 3.62, SD = 2.26, with a range from 0 to 7.

RESULTS

Manipulation Checks

To insure that immediacy and relevance were manipulated by the "guest speaker," videotapes and scripts of the presentations were analyzed. Two students who were unfamiliar with the research project or hypotheses were trained to identify immediacy behaviors. Each student watched the video tape of the presentations and recorded the number of immediacy behaviors (including gestures, looking at class, smiling, moving around, vocal variety, and moving closer to students) for each presentation. The total number of immediacy behaviors were summed for each presentation. There were significant differences in the number of immediacy behaviors between the high and low immediacy conditions $t = (14)\ 5.65$, $p < .01$.

To check the manipulation of relevance, two different students who were unfamiliar with the research project and hypotheses, analyzed the high and low relevance scripts. A high relevance script was used by the speaker in all high relevance conditions and a low relevance script was used in all low relevance conditions. The two students were trained in the concept of relevance. They were then asked to identify each phrase or sentence in the scripts that increased the relevance of the content to the students in the public speaking classes and to underline that phrase or sentence. Both students had previously taken the public speaking course so were familiar with the content and nature of the class, and able to determine what was relevant and what was not. The number of phrases and sentences were summed for each script to create a relevance score. There was a significant difference in the number of relevance

increasing phrases and sentences between the high and low relevance scripts, $t(2) = 11.31$, $p < .01$. Both immediacy and relevance appear to have been successfully manipulated.

Hypotheses One and Two

Our first hypothesis proposed that students in the high immediacy and high relevance (HI/HR) condition would report greater motivation, affective learning, and cognitive learning than students in the low immediacy and high relevance (LI/HR) condition and students in the high immediacy and low relevance (HI/LR) condition, while the second hypothesis stated that students in the HI/LR condition will report greater motivation, affective learning, and cognitive learning than students in either the low immediacy and high relevance (LI/HR) condition or the low immediacy and low relevance (LI/LR) condition. To test the hypotheses we used analysis of variance with t-tests of the least-square means (general linear models procedure in SAS).

There were significant differences in motivation among the four conditions [$F(3/182) = 11.03$, $p < .001$]. Students in the HI/HR condition felt significantly more motivated to study (M=24.26) the content presented by the guest speaker than students in LI/LR condition (M=21.49), and the students in the LI/HR condition (M=21.42). Students in the HI/LR condition (M = 25.40) were significantly more motivated than students in the LI/HR condition (M = 21.42), and students in the LI/LR condition (M = 21.49). There was no significant difference between the HI/HR and the HI/LR conditions. (See Table 1 for means and standard deviations.)

Significant differences were also found in affective learning among the four conditions [$F(3/182) = 16.04$, $p < .001$]. Students in the HI/HR condition displayed a more positive attitude toward the content presented by the guest speaker (M=24.24) than did students in the LI/LR condition (M=20.95) and students in the LI/HR condition (M=21.08). Students in the HI/LR condition (M = 24.65) had a significantly more positive attitude than students in the LI/HR condition (M = 21.08) and students in the LI/LR condition (M = 20.95). There was no significant

difference between the HI/HR and the HI/LR conditions. (See Table 1 for the means and standard deviations.)

A significant difference was also found for cognitive learning (recall of information) among the four conditions [$F(3/186) = 4.32$, $p < .01$]. Means were in the same direction as in the previous analyses. Students in the HI/LR condition ($M = 4.50$) learned more than students in the LI/HR condition ($M=2.98$) and students in the LI/LR condition ($M=3.35$). Additionally, students in the HI/HR condition learned more than students in the LI/HR condition ($M=2.98$). Again, there was no significant difference between the HI/HR and HI/LR conditions. See Table 1 for means and standard deviations.

DISCUSSION

The results of this study indicated that students in conditions containing high nonverbal immediacy, regardless of relevance, exhibited higher levels of state motivation to study, affective learning, and cognitive learning. Hypothesis one was partially supported in that the HI/HR condition resulted in greater motivation and learning than the LI/HR condition, but the HI/HR condition did not produce greater motivation and learning than the HI/LR condition. This result indicates that nonverbal immediacy is the primary factor, and relevance is having virtually no impact on motivation and learning. This result is not consistent with Frymier and Shulman's (1995) research that found relevance to have a significant relationship with motivation and learning.

Hypothesis two was supported. The HI/LR condition resulted in greater motivation and learning than either low immediacy condition. This finding lends some support to the proposal that relevance is only effective when something such as immediacy occurs first to gain students attention. However, without accompanying support for the first hypothesis, there is not a strong case for the effectiveness of content relevance.

A possible explanation for the lack of support for relevance in this study is that we did not manipulate relevance to a great enough degree. Although trained coders were able to discern differences between the

high and low relevance conditions, relevance may not have varied enough to have a differential impact on students. Examples were the primary means used in manipulating relevance. In the high relevance condition the examples were of things that were familiar to students and that involved local happenings. Examples in the low relevance condition were more abstract and involved people in general. We chose to use examples in both conditions because we wanted to keep the content and length of presentation as equal as possible. In trying to control other variables, we may have made the high and low relevance too similar. If indeed, relevance was not sufficiently manipulated, any differences in motivation and learning would be caused by immediacy.

Relevance is a content issue. Different content is presented in a highly relevant presentation of a topic than a presentation low in relevance because it is the content that makes a topic relevant. When we relate a topic to student goals, use explicit explanations, relate the topic to student experiences, and use familiar experiences and ideas to explain a topic, we are changing the content. If it is necessary to change the content of a presentation, then relevance cannot be manipulated without simultaneously manipulating a whole host of other extraneous variables. The experimental method may not be the best method for studying relevance.

This research does further support the use of immediacy in the classroom. The use of nonverbal immediacy in the classroom has a positive impact on students' motivation and learning. The present research in combination with the work by Christophel (1990), Comstock, Rowell, & Bowers (1995), Frymier (1994), Kelly & Gorham (1988), Richmond (1990), Richmond et al. (1987), and others who have found a positive relationship between immediacy and motivation and/or learning, provides strong evidence that immediate teachers are more effective than nonimmediate teachers.

We had hoped to find support for the hypothesis that relevance was only effective when immediacy was used first to gain students' attention.

We did not find strong support for this hypothesis. Nor did we find support for the underlying hypothesis that relevance influences students' motivation and learning. These results may be best explained by the questionable manipulation of relevance. While there is little research supporting the use of relevance, the technique of making content relevant to students is frequently recommended to teachers seeking to improve their teaching (K. Bain & P. Travis, personal communication, November 17, 1995; Sass, 1989; Wall Street Journal, 1995; Weaver & Cottrell, 1988). Future research should further investigate the impact of relevance in the classroom. The present research and that conducted by Frymier and Shulman (1995) focused on specific techniques to increase relevance such as using examples, exercises, and explanations to increase relevance. A greater understanding of how to make a topic relevant could be derived from further investigation of these techniques. Additional research may focus on students' perceptions of relevance, rather than on instructor techniques, and the impact of those perceptions on students.

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Table 1

State Motivation, Affective Learning, and Cognitive Learning Means

	State Motivation	Affective Learning	Cognitive Learning
High Immediacy / High Relevance	24.26ab (3.56)	24.24ab (2.92)	4.02a (2.13)
Low Immediacy / High Relevance	21.42ac (4.04)	21.08ac (3.54)	2.98ab (2.31)
High Immediacy / Low Relevance	25.40cd (4.33)	24.65cd (2.93)	4.50bc (2.01)
Low Immediacy / Low Relevance	21.49bd (4.16)	20.95bd (3.83)	3.35c (2.30)

Means sharing the same letter in a column are significantly different.
Numbers in parentheses are standard deviations.
$p < .05$